Written Testimony of
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Good afternoon, Mr. Chairman and Members of the Subcommittee. I am Donald Welsh, Regional Administrator for Region III of the United States Environmental Protection Agency (EPA). Thank you for the opportunity to appear before you today to discuss the important issue of lead in the tap water of District of Columbia residents, and the steps EPA and other agencies are taking to resolve the problem on a short- and long-term basis.

Elevated levels of lead in the environment, whether in drinking water or lead paint, can pose significant risks to health - particularly to pregnant women and young children. Reducing exposure to all sources of lead is vital to protecting the health of our citizens.

It is unacceptable to us that many families in the District continue to live with fear and uncertainty over the quality of the water they drink. At EPA, we will not be satisfied until all aspects of this problem are resolved. There is no higher priority for my office than to work with the city to protect residents.

To that end, EPA and the District of Columbia have directed - and are closely monitoring - a series of interim measures to ensure that residents have safe drinking water and proper precautionary guidance. At the same time, a multi-agency Technical Expert Working Group is acting as quickly as possible to identify and correct the cause of the elevated lead levels.

The city and EPA have had regular meetings and conversations to monitor progress and to ensure necessary actions are being taken. While we are satisfied at this point that the District of Columbia Water and Sewer Authority (WASA) is taking the required steps to deal with the immediate threat to public health, EPA reserves the right to use enforcement authorities to compel action if necessary.

Among a host of immediate steps being taken to safeguard public health, WASA is delivering certified water filters to occupants in the estimated 23,000 homes and businesses with lead service lines, and conducting additional tap water sampling to fully identify the extent of the problem in the District. There also are expanded outreach efforts underway to ensure residents have essential information to protect themselves and their families. Details of these and other actions will be provided later in this testimony.

History and Extent of the Problem in D.C.

In the District of Columbia, the regulatory framework established in EPA's 1991 Lead and Copper Rule (LCR) did not achieve key aspects of its intended objectives. The LCR requires systems to optimize corrosion control to prevent lead and copper from leaching into drinking water. To assure corrosion control is effective, the rule establishes an action level of 15 parts per billion for lead in drinking water. If lead concentrations exceed the action level in more than 10 percent of the taps sampled, the system must intensify tap water sampling and undertake a number of additional actions to control corrosion and to educate the public about steps they should take to protect their health. If the problem is not abated, the system must also begin a lead service line replacement program.

Within the last couple of years in the District of Columbia, lead concentrations in tap water in many homes increased well above the 15 parts per billion action level. In addition, public education efforts were ineffective and, we believe, not fully compliant in all instances with EPA rules.

By way of background, two public water systems are responsible for complying with provisions of the LCR in the District. The Washington Aqueduct owns and operates two water treatment plants which provide finished drinking water to WASA, as well as to Arlington County and the City of Falls Church in Virginia. The Aqueduct is responsible for all corrosion control treatment for its three customer systems. WASA, which distributes water from the Aqueduct to customers in the District, is responsible for monitoring lead and copper at its retail customers' taps. EPA's Region III office in Philadelphia has primary oversight and enforcement responsibility for public water systems in the District.

The results of D.C.'s required tap monitoring exceeded the 15 ppb action level for 10 percent of taps monitored during six of 15 reporting periods since January 1992 – three times prior to 1994 and three times since 2002.

During the 1990s, several studies were conducted by WASA, the Aqueduct, and EPA to support identification of an optimal corrosion control treatment (OCCT) for the drinking water supplied by the Aqueduct. EPA gave the Aqueduct conditional OCCT approval in 1997 and, after reviewing results from several required reports, provided final approval in 2000. Later that year, the Aqueduct replaced its secondary disinfection treatment by converting from free chlorine to chloramines, primarily to ensure compliance with EPA's more stringent requirements to combat serious health consequences related to disinfection byproducts.

The OCCT implemented by the Aqueduct appeared to be effective in minimizing lead levels until the sampling period between July 2001 and June 30, 2002. EPA received a final report from WASA on August 27, 2002 indicating that the 90th percentile value had increased to 75 ppb during that period. The high level required that WASA conduct more frequent monitoring and carry out public education. The lead action level was also exceeded for subsequent monitoring periods in 2003, with 90th percentile values at 40 ppb (January 1 to June 30, 2003) and 63 ppb (July 1 to December 31, 2003).

In 2003, EPA Region III worked through an EPA Headquarters' contractor to hire Professor Marc Edwards of Virginia Tech to help analyze the situation and make recommendations to assist the region in working with WASA. Professor Edwards' draft report delivered in October 2003 provided key input to the evaluation of the problem during the fall of 2003 and continues to aid the expert technical team convened by EPA to identify the underlying causes for elevated lead levels.

In addition to the stepped up monitoring, when WASA exceeded the action level, the authority was required to undertake a lead service line replacement program. The LCR requires that a system replace at least seven percent of the lead service lines the system owns annually until all of the lines have been replaced, or until tap water monitoring indicates that its 90th percentile lead level is equal to or less than 15 ppb. If the sample for a service line shows a concentration below the action level, the line serving that house is considered to be replaced.

Starting in March 2003, WASA began an expanded lead service line sampling program to determine the concentrations of lead contributed by individual lines. Region III received sampling results from this program on October 27, 2003. The information was reviewed by our

technical staff with an eye towards determining how to address the underlying cause of the corrosion problem. The results indicated that 385 lead service lines had been physically replaced and that an additional 1,241 lines were considered replaced because they had monitoring results below the 15 ppb action level. The report also indicated that 3,372 of 4,613 lead service lines tested through September 30, 2003 had lead levels that exceeded the lead action level. In many cases, lead levels from customer taps were very high, with levels above 300 ppb in nearly three percent of lines and above 100 ppb in 18.5 percent of lines. Frequently, several months passed between when a sample was collected and information was provided to homeowners who participated in the expanded sampling program. In addition, the notifications were not effective in relaying to the customers the significance of the problem.

Interim Steps Being Taken to Protect Residents

As indicated earlier, WASA and the District of Columbia government are undertaking a series of actions outlined by EPA to address the immediate public health threat posed by lead in drinking water. The actions include:

- WASA will ensure delivery by April 10 of the NSF International-certified water filters and consumer instructions to occupants in homes and buildings with lead service lines. Periodic replacement of the filters also will be ensured.
- Additional tap water sampling has begun in schools as part of a program to test a representative group of homes and other buildings that are not served by lead service lines to help determine the full scope of the problem. The city began the school testing program on March 27 based upon EPA's approval of the sampling protocol, and as of last Friday

(April 2) WASA had anticipated the completion of sampling at approximately 150 schools. WASA has agreed by today (April 7) to address EPA questions on the sampling plan for other facilities in the city so that we can authorize WASA to move forward on that initiative.

- WASA has committed to an accelerated schedule for physically replacing lead service lines in the District. WASA has agreed to complete 1,615 actual service line replacements during the compliance period that ends September 30 - a far greater pace than was met during the prior compliance period. As part of EPA's annual grants to the District, the agency is providing a total of $11.3 million to WASA for lead line replacement this year.
- WASA is expediting notification to customers of the results of water sampling at their residences, committing to providing results in 30 days or less. WASA has stated that residents now receive a letter that provides more detail about their sampling results, and those with high lead levels are referred to the D.C. Department of Health.
- As EPA, the District and WASA continue to expand outreach efforts to provide important information to consumers, WASA will provide to EPA for our review no later than today (April 7) an enhanced public education plan to satisfy a directive that communications on the lead issue convey the proper sense of urgency and concern for public health. The goal is to reach all sectors of the population in an effective way. WASA already has committed to a series of activities, including placing advertisements in ethnic and foreign language newspapers, developing and distributing public service announcements to radio stations, and taping a program this week on the District's cable

channel that will be shown in a variety of venues. WASA also will continue to meet with various community groups and organizations.

EPA is undertaking a compliance audit of WASA's lead service line and public education actions. In letters to WASA last week, EPA identifies instances in which requirements were apparently not met and, as part of the enforcement process, requires WASA to provide information and documentation to EPA responding to those findings. Once EPA receives the requested information, we will officially determine whether there have been violations and take the appropriate action.

In a separate initiative, an internal EPA team is evaluating WASA's prior outreach efforts - a process to be completed by month's end that involves a review of materials, interviews with residents and public officials, and a survey of best practices from public water systems around the country.

It is clear that WASA was ineffective in informing the public of the magnitude of the problem of lead in drinking water and in conveying the steps families and individuals should take to protect themselves. The spirit of the LCR encourages robust communication focused on the public's right to know. Mass media tools, including direct contact with media representatives, as is recommended in EPA guidance, were not used effectively.

The Region is taking a critical look back at how it could have done a better job in its oversight of WASA. There will continue to be lessons learned that will benefit the agency in the future. We have revised our oversight procedures to assure that shortcomings in public outreach are identified earlier and corrected. We are more closely monitoring WASA's activities to ensure that system-wide notices effectively inform customers about the lead risk and we will

ensure that information provided in WASA's next Consumer Confidence Report to customers is clear with respect to information about lead levels in drinking water.

In addition to our collaborative efforts with the city, EPA has taken a number of actions to provide information to residents and others on the issue of lead in the District's drinking water.

The Region has created a new program with the National Nursing Centers Consortium, called Lead Safe D.C., at an initial cost of $100,000, to bring lead education information, home visits and blood level testing to District neighborhoods. The consortium is the nation's only network of nurse-managed community healthcare centers, and has enjoyed great success with a similar lead information program with EPA in the City of Philadelphia.

The Region has created a comprehensive Web site that includes advice for consumers, frequently asked questions, health effects information, and links to informational hotlines, WASA and the D.C. government. It can be accessed at www.epa.gov/dclead.

EPA has dispatched community outreach specialists to provide information and get input on the lead issue from community groups and individual residents in the District. EPA has a National Safe Drinking Water Hotline, and the region is proactively providing consumer information to radio stations for use in the District. Nearly a dozen regional employees have volunteered to assist with translation to Spanish of written and broadcast materials.

Actions to Identify and Correct Source of High Lead Levels

The Technical Expert Working Group from the public and private sectors is in the midst of its investigation to identify the cause of the elevated lead levels and present a solution as

quickly as possible. The team already has met early milestones in the process. EPA is scheduled to receive a proposal by April 15 from the technical team for a water chemistry change to reduce corrosion while maintaining the optimum protection against other harmful contaminants that can be found in drinking water. The preliminary recommendation is to conduct a partial system test using orthophosphates at WASA's Fort Reno pumping station and thereafter, a full system test by feeding orthophosphates at the Dalecarlia and McMillan water treatment plants. Under the proposed timetable, the partial system test is currently planned for June 1, followed by full system implementation on or about September 1. To review the team's findings, EPA has formed an independent peer review group made up of experts who are not involved in the planning.

Until the revised treatment process is in place and lead levels in tap water are reduced, all consumers are advised to follow appropriate tap flushing recommendations and to heed the District Department of Health's advisory that pregnant or nursing women and children under 6 years of age who live in homes that have a lead service line should not drink unfiltered tap water.

Conclusion

In closing, working closely with the District of Columbia, our public service partners and concerned citizens, we will continue to aggressively act to protect residents and resolve the lead problem. We are taking action to hasten the day when the citizens of the District of Columbia can once again be confident in the safety of their drinking water.

Thank you for the opportunity to present this information this afternoon. I am pleased to answer any questions you may have.